UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,140	08/25/2003	Richard Harvey	063170.6611	3247

5073   7590   06/11/2009
BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER
LEWIS, ALICIA M

ART UNIT	PAPER NUMBER
2164	

NOTIFICATION DATE	DELIVERY MODE
06/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/648,140
Filing Date: August 25, 2003
Appellant(s): HARVEY ET AL.

Jenni R. Moen - Reg. No. 52,038
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 3, 2008 appealing from the Office

action mailed May 15, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: a new ground of rejection is presented with respect to claims 1-6 and 13-17.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| US 2004/0002955 A1 | Gadbois et al. | 1-2004 |
| US 2002/0019827 A1 | Shiman et al. | 2-2002 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) (*current application priority date*

8/26/2002) as being unpatentable over Shiman et al. (US 2002/0019827 A1, *priority*

date 6/5/2000) ('Shiman') in view of Gadbois et al. (US 2004/0002955 A1, *filing date*

6/28/2002) ('Gadbois').

With respect to claims 1 and 7, Shiman teaches:

providing a database having object classes and attributes (paragraph 9);

defining attributes of a specific type (primary keys) which correspond to a specific object class, each attribute unique to the specific object class to which the attribute belongs (paragraph 9); and

generating an index based on the specific attribute types (paragraph 9).

Shiman does not explicitly teach that the database is a part of a web services directory.

Gadbois teaches information model mapping with shared directory tree representation (see abstract), in which he teaches using a database to provide a web services directory (paragraph 5 lines 14-25 and paragraph 24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shiman by the teaching of Gadbois because a web services directory would enable a registry service to help support the storage and retrieval of data and enable authentication, which would provide secure access to Internet services and applications (Gadbois, paragraphs 24 and 25). The modification would also enable an improved method and system for storing and maintaining object-oriented data in an RDBMS, more particularly for storing and maintaining directory information objects, such as LDAP data, in an RDBMS.

With respect to claims 2, 8 and 14, Shiman in view of Gadbois teaches wherein the object classes are a subclass of an abstract object class (Shiman, paragraph 9).

With respect to claims 3, 9 and 15, Shiman in view of Gadbois teaches wherein the specific object class relates to at least one of keyed references, names and classes (Shiman, paragraph 9; Gadbois, paragraph 38, paragraph 64).

With respect to claims 4, 10 and 16, Shiman in view of Gadbois teaches wherein the object class is an auxiliary object class (Shiman, paragraph 9; Gadbois, paragraphs 38-39, paragraph 47, paragraph 64).

With respect to claims 5, 11 and 17, Shiman in view of Gadbois teaches wherein the auxiliary object class is a Publisher Assertion Keyed Reference (Gadbois, paragraphs 38-39, paragraph 47, paragraph 64).

With respect to claims 6 and 12, Shiman in view of Gadbois teaches further comprising providing specific attributes which relate to one object class for a purpose of enhancing searching (Shiman, paragraphs 11 and 88; Gadbois, paragraph 25).

With respect to claim 13, Shiman teaches:

providing a database having a plurality of object classes, the plurality of object classes having a plurality of attributes, each attribute unique to an object class (paragraph 9);

defining a plurality of unique names for each of the plurality of attributes, each of

the plurality of unique names (primary keys) uniquely identifying the object class to

which a particular attribute belongs (paragraph 9); and

generating an index based on the plurality of unique names (paragraph 9).

Shiman does not explicitly teach that the database is a part of a web services

directory.

Gadbois teaches information model mapping with shared directory tree

representation (see abstract), in which he teaches a web services directory (paragraph

5 lines 14-25 and paragraph 24).

It would have been obvious to a person having ordinary skill in the art at the time

the invention was made to have modified Shiman by the teaching of Gadbois because a

web services directory would enable a registry service to help support the storage and

retrieval of data and enable authentication, which would provide secure access to

Internet services and applications (Gadbois, paragraphs 24 and 25).

(10) Response to Argument

Claims 1, 3-5, 7, 9-11, 13 and 15-17 – Shiman-Gadbois Combination

Applicant argues that the proposed Shiman-Gadbois combination does not

disclose, teach, or suggest "defining attributes of a specific type which correspond to a

specific object class, each attribute unique to the specific object class to which the

attribute belongs." Examiner disagrees. According to paragraph 9, Shiman teaches

that an object class defines a type of object comprised of certain attributes, and further

that objects are discrete manifestations of object classes. Shiman further teaches that every object can by indexed by the value of its primary key attribute, which is a unique name for the object. Therefore, each defined attribute (primary key attribute) is specific to its object class, and each primary key attribute is unique to the specific object class.

Applicant argues that Shiman only indicates that an object class includes certain attributes and that the collection of these attributes values may be used to uniquely identify the object, and that this is not analogous to disclosing that only one object class includes certain attributes. However, there are no limitations in the claims that require only one object class to include certain attributes. Applicant's claim language requires defined attributes of a specific type to correspond to a specific object class, and that each defined attribute be unique to the specific object class to which it belongs. Thus, Shiman's primary key attributes represent defined attributes of a specific type, which correspond to a specific object class (i.e. the object class to which the object belongs), and each primary key attribute value is a unique name for the object. Every object belongs to an object class, and thus the chosen primary key attribute represents an unique, defined attribute for a particular object class. The value of the primary key attribute relates to a particular object, and not the actual primary key attribute. For example, an employee object class may have social security number as its primary key attribute. An object of the object class, such as John, would have a specific primary key attribute value such as a SSN of 123-45-6789. Thus contrary to Applicant's argument, the primary key attribute is unique to the object class, and the value of the primary key attribute is specific to the object.

Further, in response to the Examiner's Advisory Action mailed August 13, 2008 Applicant argues that a primary key attribute having a value of "red hair" does not uniquely identify a person. However, in the advisory action the Examiner only used the object class "people" and primary attribute "hair color" as examples to show the difference between object classes, objects, primary key attributes and the values of primary key attributes, and not to show "hair color" as an actual primary key attribute. Shiman does not explicitly recite the primary key attribute for the object class people, however he does recite that every object has a primary key attribute value that uniquely identifies an object, thus meaning that every object class has a primary key attribute that uniquely identifies the object class.

Thus, Shiman does in fact teach defining attributes of a specific type which correspond to a specific object class, each attribute unique to the specific object class to which the attribute belongs. Each primary key attribute represents a defined attribute for a particular object class, and further each primary key attribute is unique to the specific object class to which it belongs. By definition, a primary key is a unique identifier of an object class, thus in order for a primary key attribute to uniquely identify a particular object class, the primary key attribute can only be used for that single object class and not for other object classes. Therefore, it is clear that the primary key attributes of Shiman are unique to the specific object class to which the attribute belongs.

Applicant further argues that one of ordinary skill in the art at the time the invention was made would not have been motivated to combine the cited references.

Examiner disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation was found in the references themselves. Both Shiman and Gadbois are directed to storage and retrieval of stored objects. More specifically, Shiman teaches managing various document versions in a centralized document repository, and Gadbois teaches a registry service for managing relationships between entities (objects). Thus it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shiman by the teaching of Gadbois to enable Shiman to use a registry service to support storage and retrieval of the various document versions. This would further enable authentication, which would provide secure access to Internet services and applications providing documents. The modification would also enable an improved method and system for storing and maintaining object-oriented data in an RDBMS, more particularly for storing and maintaining directory information objects, such as LDAP data, in an RDBMS.

Claims 2, 8 and 14   – Shiman-Gadbois Combination

Applicant argues that the proposed Shiman-Gadbois combination does not teach or suggest that "the object classes are a subclass of an abstract class." Examiner disagrees. Shiman teaches a relational database having object classes (paragraph 8-10). The database name or filename of the database having database objects may be considered the abstract object class; and therefore all of the object classes stored in the database are considered subclasses of the abstract object class (i.e. database name or filename). Furthermore, as explained in the 103 rejection, Gadbois teaches using a database to provide a web services directory, and he further teaches a directory tree. It is clear that the directory has object classes and subclasses. For example, Figure 2 shows an abstract object class "Host" having object classes as subclasses, i.e. Organization, Business Services, and Publisher Assertions. Thus it is clear the Shiman-Gadbois combination teaches the object classes are a subclass of an abstract class.

Applicant again argues that the Shiman-Gadbois combination is improper. However, as explained above the Examiner disagrees. Please see the remarks above regarding the Shiman-Gadbois combination.

Claims 6 and 12 – Shiman-Gadbois Combination

Lastly Applicant argues that the Shiman-Gadbois combination fails to teach providing specific attributes which relate to one object class for a purpose of enhancing searching. The Examiner disagrees. Shiman teaches that specific attributes, such as primary keys, are used to index object classes, and he further teaches the use of

databases for search and retrieval. Therefore, the attributes are used for enhanced searching. Also, the intended use of the attributes does not necessarily limit the claim.

As explained above, a defined attribute (primary key) uniquely identifies the object class to which it belongs and the value of the primary key uniquely identifies a particular object. Applicant argues that disclosing that an object class includes certain attributes is not analogous to providing specific attributes which relate to one object class. The Examiner disagrees. Claims 6 and 12 do not recite that specific attributes relate to only one object class, but instead recites that the attributes relate to one object class, which when given its broadest reasonable interpretation only requires that the attributes relate to at least one object class. Thus, the specific attributes name, hair color and height relate to one object class (people).

Shiman further teaches that descriptive keywords (specific attributes) are intended to serve as identifiers for groups and documents (object classes), and that documents can be linked to descriptive keywords (i.e. attributes related to an object class) so that searches are faster and search results are relevant (paragraph 88). Thus the Shiman-Gadbois combination teaches providing specific attributes which relate to one object class for a purpose of enhancing searching.

Applicant again argues that the Shiman-Gadbois combination is improper. However, as explained above the Examiner disagrees. Please see the remarks above regarding the Shiman-Gadbois combination.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

/Alicia Lewis/
Art Unit 2164

Conferees:

/James Trujillo/

Supervisory Patent Examiner, Art Unit 2169

/Charles Rones/

Supervisory Patent Examiner, Art Unit 2164